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Sympodioplanus yunnanensis, a new aquatic species from submerged decaying leaves

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Abstract — *Sympodioplanus yunnanensis* sp. nov. from submerged leaves collected from Gengma county, Lincang city, was found when researching aquatic hyphomycetes in Yunnan. The new species is well defined as a *Sympodioplanus* by its sympodial proliferation with multiple and crowded conidiogenous loci in the upper conidiophores and elongated conidia. It differs in conidial shape and septation from the type species, *S. capensis*.

Key words — anamorphic fungi, taxonomy

Introduction

Fungal diversity in southern China is high, and many anamorphic fungi collected in Yunnan Province have been published (Ma & Zhang 2007a,b,c, Shang & Zhang 2007, Wang & Zhang 2007, Ma et al. 2008, 2010, 2011, Zhang et al. 2009a,b,c, 2011a,b).

Sinclair et al. (1997) erected *Sympodioplanus* R.C. Sinclair & Boshoff for anamorphic fungi that exhibit sympodial proliferation with multiple and crowded conidiogenous loci in the upper part of the brown conidiophore, and elongated conidia with septa. Up to now, the monotypic genus comprised only *S. capensis* R.C. Sinclair & Boshoff isolated from dead decorticated wood. We add here a second species, *S. yunnanensis*, isolated from submerged decaying leaves.

Materials & methods

In 2010, a culture was isolated from leaves of a dicotyledonous plant submerged in a river in Yunnan Province, China. A 2 × 5 cm rotten leaf was spread on the surface of CMA (20 g cornmeal, 18 g agar, 40 mg streptomycin, 30 mg ampicillin, 1000 mL distilled water) and incubated for ten days; single conidia were isolated using a sterilized

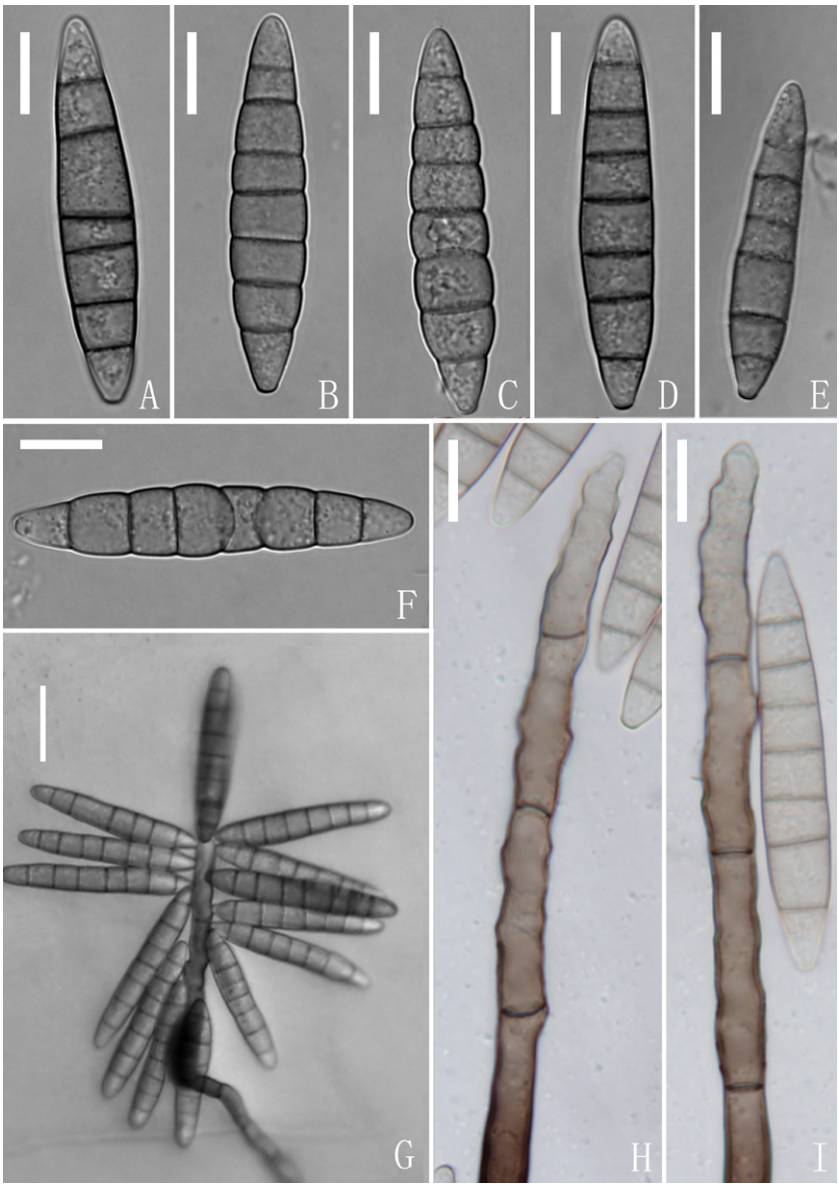

Plate 1. *Sympodioplanus yunnanensis* (holotype: YMF1.03797). A–F. Conidia. G. Conidiophores bearing conidia. H–I. Conidiophores showing moderate protuberance in the apex region. Scale bars: A–F = 10 μm, G =25 μm, H–I = 10μm.

toothpick viewed under a CX31 microscope and cultivated on CMA in Petri plates. Morphological observations were made from CMA after incubation at 25°C for one week; pure cultures and a permanent slide were deposited in the herbarium of Laboratory for Conservation and Utilization of Bio-resources, Yunnan University, Kunming, Yunnan, P.R. China (YMF).

Taxonomy

Sympodioplanus yunnanensis G.Z. Yang & Z.F. Yu, **sp. nov.** Plate 1

MycoBank MB 563548

Differs from *Sympodioplanus capensis* by its larger conidia with more numerous septa.

Type: PR China, Yunnan Province, Lincang city, Meihua mountain, 23°38′N 99°22′E, elev. 1925 m, in a river on submerged leaves of an unidentified dicotyledonous plant, Dec 2010, G.Z. Yang (**Holotype**: YMF 1.03797; ex-type culture YMF 1.03797).

Etymology: *yunnanensis* refers to the province in which the species was found.

Colonies effuse, brown, sparse, hairy, often inconspicuous, attaining 30 mm diam after 10 days on CMA at 25°C. Mycelium mostly immersed in the substrate, composed of branched, septate, hyaline to brown, smooth, 1.0–3.0 µm wide hyphae. Conidiophores macronematous, mononematous, solitary or in groups, erect, simple, straight, septate, brown, paler towards the apex, smooth, ≤ 70–205 µm long, 4.5–6.7 µm wide. Conidiogenous cells holoblastic, polyblastic, integrated and terminal, sympodial, thin-walled, bearing multiple, closely approximated protuberances at the upper cells, including the apex. Scars are flat in relation to the adjacent conidiogenous cell wall and not thickened, 0.5–1.0 µm wide. Conidia solitary, smooth, mostly spindle with truncate base, occasionally constricted at septa, at the apex mostly slightly attenuate, 38–56 × 6.0–10.8 µm, thin-walled, mostly 7-, sometimes 6-, 5-, or 4-septate.

Comments: *Sympodioplanus yunnanensis* was easily determined as a *Sympodioplanus* by its similarity to the type species (*S. capensis*) in exhibiting sympodial proliferation with closely placed multiple conidiogenous loci in the upper conidiophore that are flat and equally thick as the conidiophore wall, forming solitary terminal and lateral conidia with cell walls similar to those of the upper conidiophore, and in producing elongated conidia with eusepta. However, the conidia of *S. capensis* are smaller (13–16(–19) × 2.5–4 µm) and have fewer septa (3(–5)-septate).

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